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# Mobile DVR (MDR)

## User Manual

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# 1. Overview

## 1.1 Introduction

Mobile DVR adopt highly integrated H.264 ASIC, using the SD card or hard disk as a video storage medium. The system is with strong anti-vibration capability. Sealed housing is suitable for use in vehicle environment.

In addition to integrated vehicle status monitor, MDVR support built-in GPS, 3G and WIFI modules.

The MDVR system support CMS software for PC and mobile phones. The playback software of MDR achieve multi-channel playback with GPS ,speed information etc.

MDVR is widely used in buses, taxis, police cars, law enforcement vehicles, and other various types of vehicles

## 1.2 Features

- ✧ H.264 Compression, Record Resolution Up to D1
- ✧ Dual Stream for Recording and Network transmit
- ✧ Support Hard disk / SD card recording,
- ✧ SD card and Network Backup
- ✧ 6-36V power input
- ✧ Vent-free enclosure design

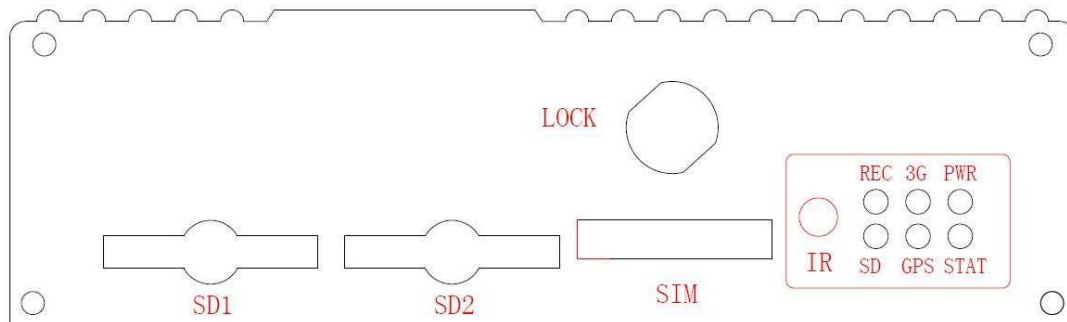
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## 2. Installation Notes

- MDR is not waterproof; please install it in dry environment, to avoid the wet, drip, sprinkler and other places.
- MDR should be installed in the vehicle ventilated area, and to ensure that the vehicle away from the heat source. Should not be installed in a closed space.
- To extend life of MDR, if possible, installed MDR at weaker vibration space in vehicles, such as space behind the driver
- Topping red gum between all screws and nuts or fixed components to prevent loosening.
- Comply with all regulatory requirements for electronic products during the installation and operation of MDR, as well as vehicles and other connected equipment.
- MDR DC power input range is 6V to 36V, please be careful not to take anti-polarity, the output can not be shorted. Please note that the power supply capacity of the power cord.
- MDR power output is 12V, only to be used to power the allowing equipment; power off the MDR before connecting with external device
- Handle and transfer MDR with care. Fall May cause internal hard drive and other precision parts damage

### 3. Device Interface description (sample)

#### 3.1 Front Panel Description



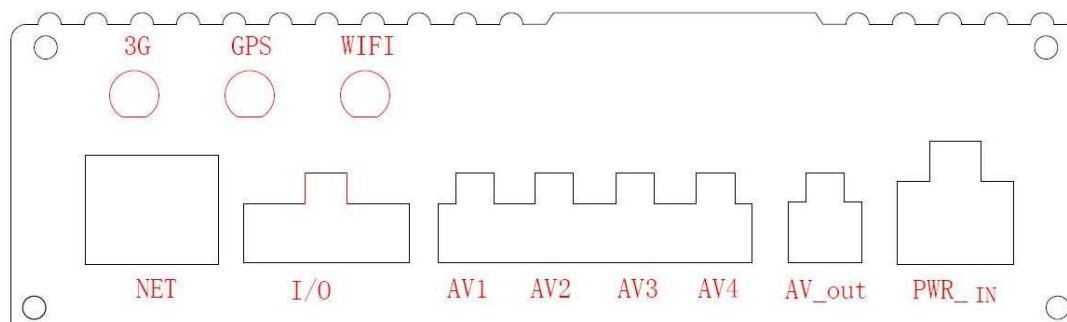
##### Indicator Description

Indicator	IR	REC	3G	PWR	SD	GPS	STAT
Function	IR	Record status	3G status	Power	SD status	GPS status	Run status

##### Interface Function Description

Video Out	Front panel video output (optional)
SD1	SD card slot
SD2	SD card slot
IR	Infrared receiver window
LOCK	SD card tray lock
SIM	SIM card slot (built-in 3G models have this interface)

#### 3.2 Rear Panel Description



AV1-AV4	Camera connector 1-4, including 12V power supply output, video input, audio input
AV_out	Monitor connector, including 12V power supply output, video output, audio output
PWR_IN	Power input connector, including power input, GND, ACC, Door signals
I/O	IO connectors:4 SENSOR_IN ,1 SIN,1GND,2 ALARM_OUT,1 RS 232, 1 RS 485
NET	Ethernet port
GPS	GPS Antenna Interface (optional)
3G	Mobile Communication Module Antenna Interface (optional)
WiFi	WLAN antenna interface (optional)

### 3.2.1 Camera connector

AV 1-4 is defined as follows



Audio In	GND
12V OUT	Video in

### 3.2.2 Monitor Connector

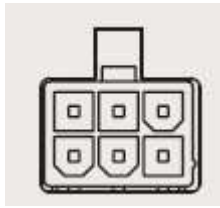
AV\_OUT is defined as follows



Audio Out	GND
12V OUT	Video Out

### 3.2.3 Power in Cable

Power in Cable Defined as follow

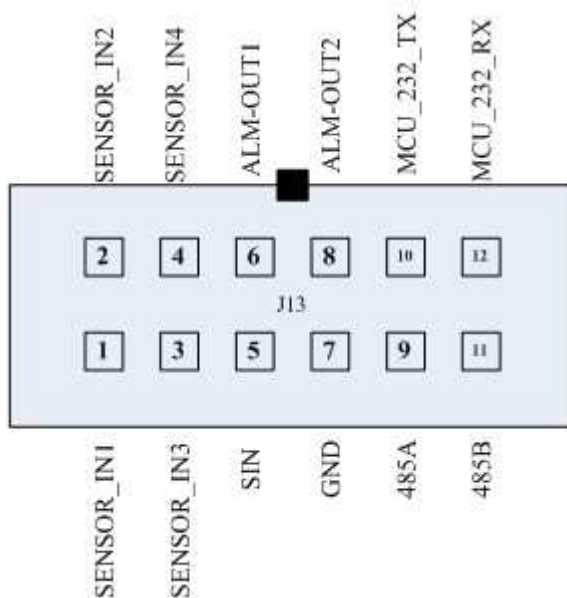


DC PWR_IN +	DC PWR_IN -	GND
DC PWR_IN +	DC PWR_IN -	ACC



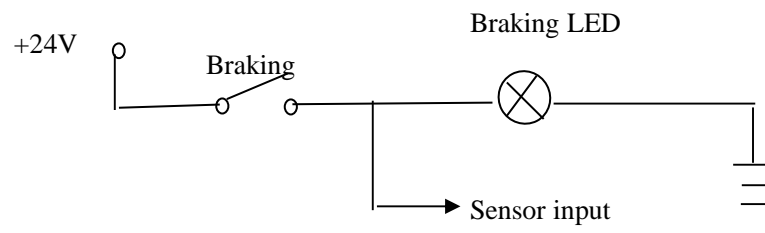
### 3.2.4 I/O combination Cable

I/O port, includes vehicle status interface, RS232, RS485, RS422, alarm input and output , Vehicle status interface 2-6 also can be used as active alarm input。 Signal is defined as follow：

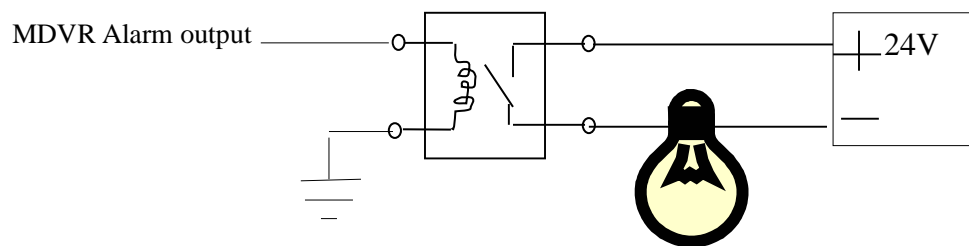


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Speed sensor input connection:

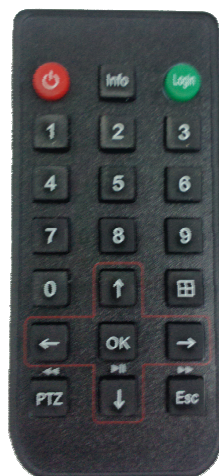


Alarm output connection:



## 4.Operating

### 4.1 Remote Controller



MDVR product panel has no direct control button on the need to use the remote control with the operation.

Remote control buttons and functions are introduced:

A numeric keypad:

[0-9] key: setting status, digital input keys used to select the numbers. 1,2,3,4 keys for switching between channels in the playback and preview













(2) Set the menu navigation:

▲, ▼: Under the cursor moving key;


◀, ▶: Left and right cursor direction keys;

[ENTER]: In the set state, said the selection and preservation;

Other function keys as follows:

 Shutdown	On/Off button, Shutdown when the MDR is on, Turn on when the MDR is off
 LOGIN	When MDVR have set password, press the LOGIN to enter the password. Noted the system without restore and factory default function, please do remember the password; If the MDVR without password, press LOGIN could visit the main menu;
 INFO	Information, press INFO to quickly view the configuration information of GPS, 3G and other modules;
 Layout switch,	Press the key switch between no split and 4 split, Press <b>【1】—【4】</b> to switch to Zoom the image to full screen
 RETURN / CANCEL	Return to upper level menu. exit the setup menu to the monitor screen Finally;
 PAUSE / STEP	Pause when playback,press STEP to play in frame.
 GOTO	Jump to a specified time to play during the playbak
 PLAY	PLAY
 FWD	Fast forward, Switch between 2/4/8/16x
 REW	Fast rewind, Switch between 2/4/8/16x
 STOP	Stop
 RECORD	manual record



 NEXT	Slow motion key, switch between 1/2, 1/4, 1/8;
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### 4.2.1 Login



The default login username is 000000, password is 122222.

### 4.2.2 Menu



Menu and corresponding function:

Video search	search the record file from hard disk /SD card to playback
Record setting	set the video、 audio parameters,and recording mode
System setting	Set the alarm, PTZ, time, network
System Information	Display the serial number, version information, MAC address.. etc system information
Vehicle information	set the vehicle license plate number, timer switch on/off, WIFI..etc
Display Settings	Set the monitor screen and the content of the video data, including the display of information, regional, color, volume, etc

Password management	Set the machine password
Exit	exit the menu interface, returns to direct the monitoring interface

### 4.2.3. The preview interface



Figure With card video recording and without card prompts on the monitor screen

Straight through the preview screen will display the message of the state of equipment and each channel state, the meaning of the message is as follows:

2011-8 - 31 09:54:34	shows the system time
CH1/2/3/4	channel name
● REC	Said video recording is in progress
NO DISK	that there is no video recording
The GPS: NO ...	when you press the remote control "INFO" key quickly to display system information, such as GPS and other state

## 4.2.4 video retrieval



Figure 11 video retrieval map

And video retrieval interface provide to retrieval, playback and backup video files stored in the disk

Retrieval methods can choose to fast and precise time positioning, time period recording status browsing and detailed video file browsing.

Instructions:

1. Go to the video search interface, click Search - file list directly to the current time by default, you can playback or read the video file.
2. Fast and precise positioning retrieval methods:
  - Enter the date and time of the recoding video you want to play (defaults as the last minute of the video search interface).
  - Recording mode color-coded, red for alarm recording time, green for ordinary video file recording time, no colors represent the time period has no any recording files.
  - Month recording status in days mode, daily recording in half-an-hour mode.
  - Select the recording video in recording status in the day, then can play the video recorded in that period directly.
3. Detailed video recording file browse and retrieval:
  - If the retrieved time period recording, Click the <detailed file> Button to open a browsing interface of the detailed files, the list shows the recording video by date selected, then you can flip pages to browse .
  - Display content, including video files, start time, end time, file size, video type.
  - Screening by record type file.
    - You can select the video file, and select the video files are backed up.

## 4.2.5 video playback instructions

A single-channel playback and multi-channel synchronous playback in two ways.

2 player mode control, including:

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- Select normal playback, single frame playback, slow motion, fast forward and rewind.
  - Adjust the volume.
- (1) Fast forward: 2X (2x)-16X (16x)
  - (2) Rewind: 2X (1 minutes back)-16X (Back 8 minutes)
  - (3) jump (GOTO): pop-up input box to display the change to play the beginning of the file (start) to end (end) time scope, the time edit box is set to jump time (must between start and end time), exit edit box, select OK.>, OK!
- Such as:
- Start: [02:00:00] end: [02:30:00]
- Editor [02:18:00] to determine after the jump to the time to play around [02:18:00]

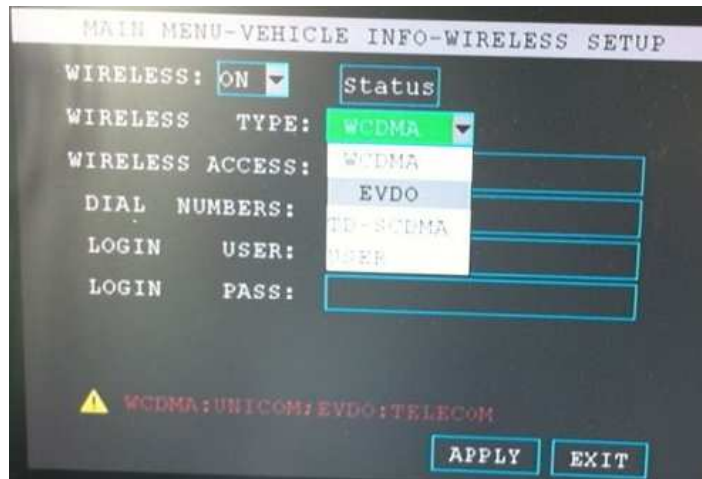
## 5. 3G network & platform using

### 5.1 3G network instructions

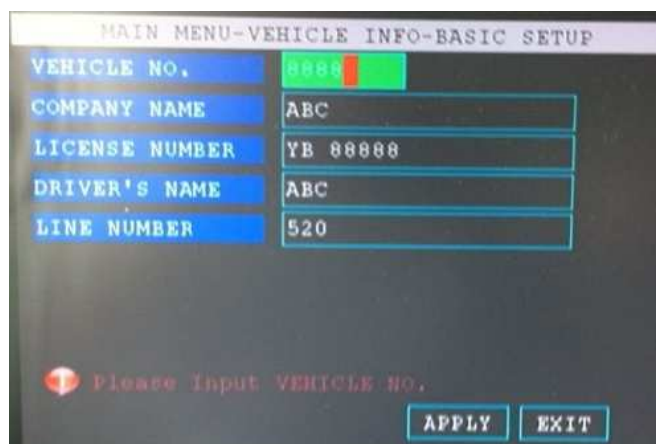
- 1) Confirming which Telecom operator you use ,China Telecom, China Unicom or China Telecom?
- 2) Inserting the 3G card (SIM card),make sure the 3G card balance)
- 3) Checking the 3G antenna is connected properly
- 4) The product's setting which need reconfirming



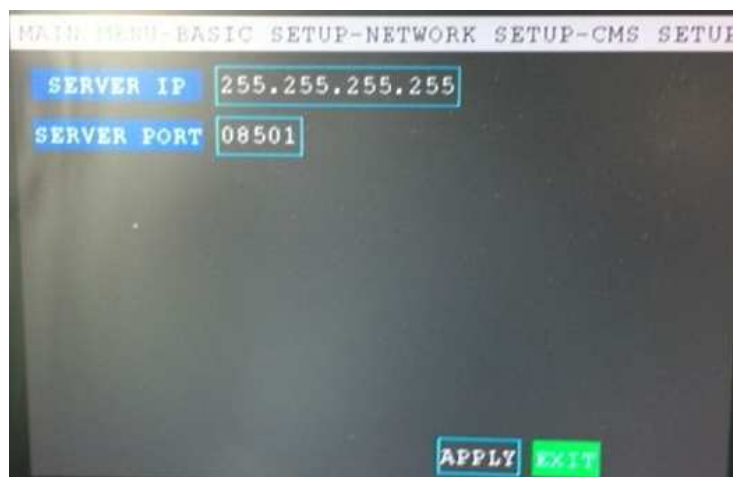
Main Menu -Recording Setting- Small stream configuration. The remote 3G watching's channel code need setting as open. The user could change different channels resolution (CIF or QCIF) and frame rate based on different conditions



Main Menu - Vehicle management- Wireless internet access function need to set as open

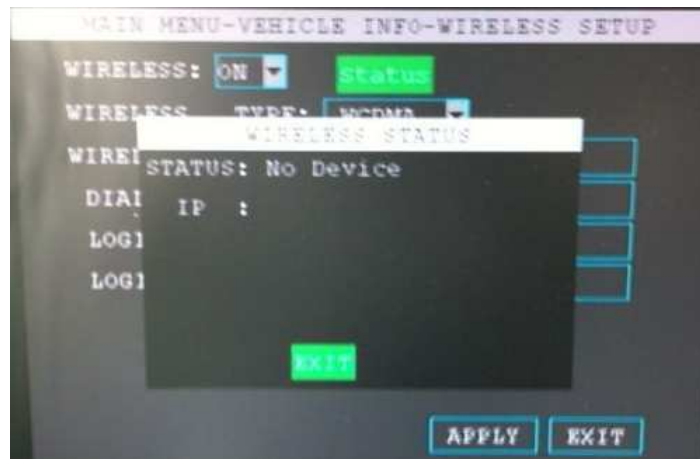


Main Menu - vehicle management - basic settings, need to confirm with the supplier whether the vehicle number (such as 04017 ) assigned correctly



Main page - Settings - Network setting -CMS configuration, confirm with the supplier whether the center IP address and IP port number are correct

5) Confirm whether the device is dial successfully

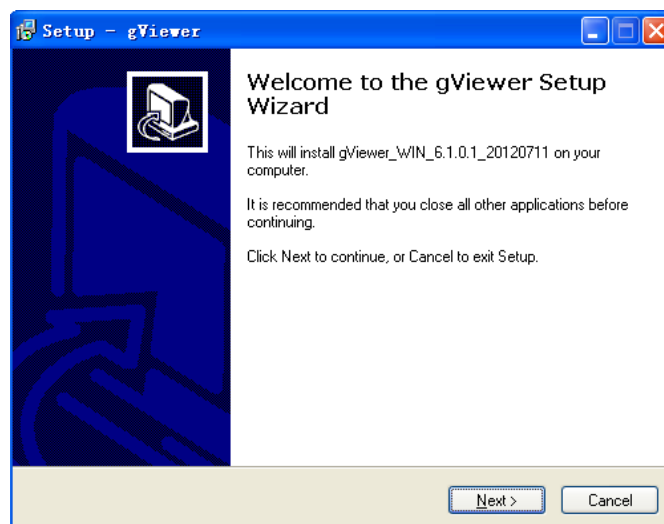


Main page - vehicle management - wireless settings, check the wireless status if the IP display normally. If the IP address is blank, it means unsuccessfully setting; if IP address is 172.45.144.251, it means successfully setting

## 5.2 3G platform using instruction

1) installing client software

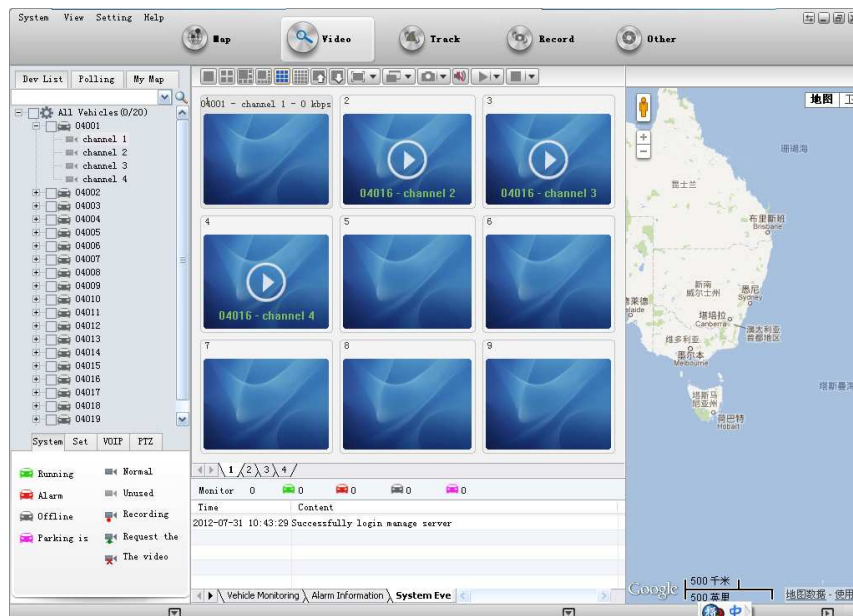
New client downloading address: <http://210.22.8.99/download.html>, or ask the supplier to provide, Pls press Next STEP to install



2) Sign in



Ask the Supplier for administrator and password, the server and port



After a successful login , Double-click the device channel you would like

## 5.3 3G Checking

1) Checking if it dials successfully

```
C:\Documents and Settings\admin>ping 210.22.8.99

Pinging 210.22.8.99 with 32 bytes of data:

Reply from 210.22.8.99: bytes=32 time=4ms TTL=122
Reply from 210.22.8.99: bytes=32 time=5ms TTL=122
Reply from 210.22.8.99: bytes=32 time=9ms TTL=122
Reply from 210.22.8.99: bytes=32 time=8ms TTL=122
```

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As above means successful

```
C:\Documents and Settings\admin>ping 210.22.8.98

Pinging 210.22.8.98 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.
```

As above means fail

2) check the server IP (such as 116.255.233.211)

```
C:\Documents and Settings\admin>ping 116.255.233.211

Pinging 116.255.233.211 with 32 bytes of data:

Reply from 116.255.233.211: bytes=32 time=52ms TTL=117
Reply from 116.255.233.211: bytes=32 time=50ms TTL=117
Reply from 116.255.233.211: bytes=32 time=54ms TTL=117
```

If all work well. It means OK